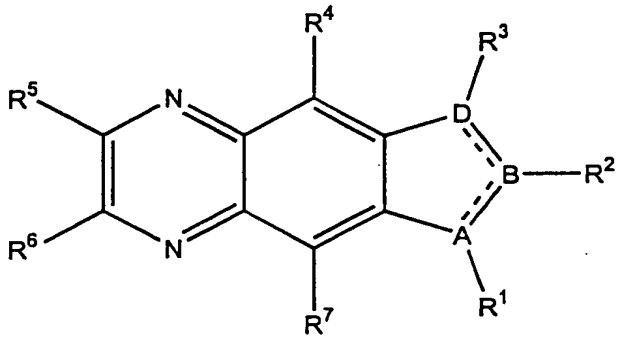
CLAIMS

WHAT IS CLAIMED:

1. A compound having the chemical structure:



wherein,

A, B, and D are independently selected from the group consisting of carbon, nitrogen, oxygen and sulfur;

The dotted line in the five-member ring signifies that either the A-B bond or the B-D bond is a double bond;

when A, B or D is oxygen or sulfur, R^1, R^2 or R^3, respectively, does not exist;

when A, B or D is nitrogen and said nitrogen is participating in a double bond, R^1, R^2 or R^3, respectively, does not exist;

When A, B or D is nitrogen and said nitrogen is not participating in a double bond, R^1, R^2 or R^3 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, aryl, hydroxy, alkoxy, halo, C-carboxy, O-carboxy, carbonyl, thiocarbonyl, C-amido, guanyl, sulfonyl and trihalomethane-sulfonyl;

R^4, R^5, R^6 and R^7 are independently selected from the group consisting of hydrogen, alkyl, trihaloalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heteroaryl, heteroalicyclic, hydroxy, alkoxy, aryloxy, thiohydroxy, thioalkoxy, thioaryloxy, sulfinyl, sulfonyl, N-sulfonamido, S-sulfonamido, trihalomethylsulfonamido, carbonyl, thiocarbonyl, C-carboxy, O-carboxy, C-amido, N-amido, cyano, nitro, halo, O-carbamyl, N-carbamyl, O-thiocarbamyl, N-thiocarbamyl, ureido, guanyl, guanidino, amino and $-NR^{10}R^{11}$ with the proviso that, when one of R^5 or R^6 is hydrogen, methyl or phenyl, the other cannot be any of hydrogen, methyl or phenyl;

R^{10} and R^{11} are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, carbonyl, sulfonyl and, combined, a five- or six-member heteroalicyclic ring; and,

a physiologically acceptable salt or a prodrug thereof.

2. The compound, salt or prodrug of claim 1 wherein:

A is nitrogen;

B is carbon;

the B-D bond is a double bond; and

D is nitrogen.

3. The compound, salt or prodrug of claim 2 wherein R^1 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, carbonyl, C-carboxy and halo.

4. The compound, salt or prodrug of claim 3 wherein R^2 is selected from the group consisting of hydrogen, alkyl, cycloalkyl, trihalomethyl, aryl, halo, O-carboxy, hydroxy, alkoxy, aryloxy, amino and $-NR^{10}R^{11}$.

5. The compound, salt or prodrug of claim 4 wherein R^4 and R^7 are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkoxy, aryloxy, C-carboxy, hydroxy and halo.

6. The compound, salt or prodrug of claim 5 wherein R^5 and R^6 are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, alkoxy, aryl, aryloxy, heteroaryl, heteroaliphatic, hydroxy and halo with the proviso that when one

of R^5 or R^6 is hydrogen, methyl or phenyl, the other is not any of hydrogen, methyl or phenyl.

7. The compound, salt or prodrug of claim 1 wherein:

A is nitrogen;

the A-B bond is a double bond; and,

D is sulfur.

8. The compound, salt or prodrug of claim 7 wherein R^2, R^4 and R^7 are independently selected from the group consisting of hydrogen, alkyl or cycloalkyl.

9. The compound, salt or prodrug of claim 8 wherein R^5 and R^6 are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, hydroxy, alkoxy and aryloxy.

10. The compound, salt or prodrug of claim 1 wherein:

A is sulfur;

B and D are carbon; and,

the B-D bond is a double bond.

11. The compound, salt or prodrug of claim 10 wherein R^2 and R^3 are independently selected from the group consisting of hydrogen, alkyl, cycloalkyl, aryl, C-carboxy and C-amido.

12. The compound, salt or prodrug of claim 11 wherein R^4 and R^7 are independently selected from the group consisting of alkyl, cycloalkyl, hydroxy, alkoxy, aryloxy and carbonyl.

13. The compound, salt or prodrug of claim 12 wherein R^5 and R^6 are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl and heteroalicyclic with the proviso that when one of R^5 or R^6 is hydrogen, methyl or phenyl, the other is not any of hydrogen, methyl or phenyl.

14. A pharmacological composition of said compound, salt or prodrug of claim 1.

15. A method for treating or preventing a protein tyrosine kinase related disorder in an organism comprising administering to said organism a therapeutically effective amount of said pharmacological composition of claim 14.

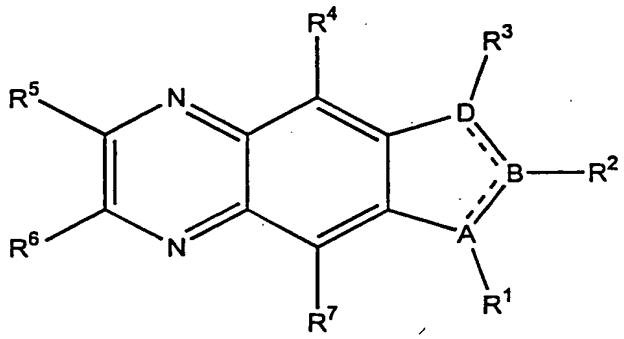
16. The method of claim 15 wherein said protein tyrosine kinase related disorder is selected from the group consisting of an EGF related disorder, a PDGF related disorder, an IGF related disorder and a met related disorder.

17. The method of claim 15 wherein said protein tyrosine kinase related disorder is selected from the group consisting of blastoglioma, Kaposi's sarcoma, melanoma, lung cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, astrocytoma, head cancer, neck cancer, bladder cancer, breast cancer, small-cell lung cancer, colorectal cancer, thyroid cancer, pancreatic cancer, gastric cancer, leukemia, lymphoma, Hodgkin's disease and Burkitt's disease.

18. The method of claim 15 wherein said protein tyrosine kinase related disorder is selected from the group consisting of arthritis, diabetic retinopathy, restenosis, hepatic cirrhosis, atherosclerosis, angiogenesis, glomerulonephritis, diabetic nephropathy, thrombic microangiopathy syndromes, transplant rejection, autoimmune disease, diabetes and hyperimmune disorders.

19. The method of claim 15 wherein said organism is a human.

20. A method for treating or preventing a protein tyrosine kinase related disorder in an organism comprising administering to said organism a therapeutically effective amount of a pharmacological composition of a compound, its salts or its prodrugs, having the chemical structure



wherein:

A is selected from the group consisting of nitrogen, oxygen and sulfur;

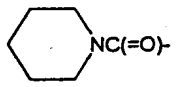
B and D are selected from the group consisting of carbon and nitrogen with the proviso that, when B is nitrogen, D is not nitrogen and when D is nitrogen, B is not nitrogen;

The dotted line in the 5-member ring signifies that either the A-B or the B-D bond may be a double bond, it being understood that, when atom A is oxygen or sulfur or when atom B or D is nitrogen

and said nitrogen is participating in a double bond, R^1, R^2 or R^3, respectively, do not exist;

R^1 is selected from the group consisting of hydrogen, methyl, chloro and acetyl;

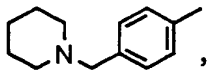
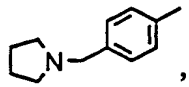
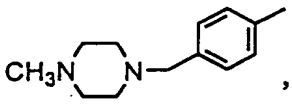
R^2 is selected from the group consisting of hydrogen, methyl, trifluoromethyl, hydroxy, 4-methylphenyl, $HOC(=O)-$, $CH_3OC(=O)-$, $H_2NC(=O)-$, $(CH_3CH_2)_2NC(=O)-$, and;

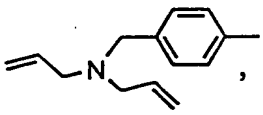
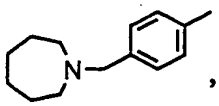
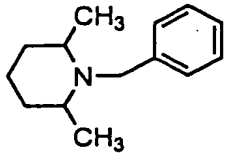


R^3 is selected from the group consisting of hydrogen, methyl and CH_3O-;

R^4 is selected from the group consisting of hydrogen, CH_3O- and 4-methylphenyl;

R^5 and R^6 are the same and are selected from the group consisting of chloro,

Et_2NCH_2Ph- , Me_2NCH_2Ph- ,  ,  ,  ,

nPr_2NCH_2Ph- ,  ,  ,  ; and,

R^7 is selected from the group consisting of hydrogen and methyl.

21. The method of claim 20 wherein R^5 and R^6 are independently selected from the group consisting of hydrogen, methyl, phenyl and hydroxy.